

**AMENDMENTS TO THE CLAIMS**

Claims 1-20 (Canceled)

21. (Allowed) A method for preparing to detect an emitter signal which emitter signal presents a plurality of illumination times to a detecting receiver, the method comprising:  
determining at least one first illumination time of the plurality of illumination times;  
determining at least one second illumination time of the plurality of illumination times; and  
iteratively searching for a detection revisit time that is used to detect the first and second illumination times while satisfying a specified probability of detecting the emitter signal.

22. (Allowed) The method according to claim 21, further comprising an act of determining an initial value of detection revisit time, and wherein the act of iteratively searching comprises an act of incrementing the initial value of detection revisit time, and determining whether the decremented value satisfies the acceptable probability of detecting the emitter signal.

23. (Allowed) The method according to claim 22, further comprising an act of determining a step value, and wherein the act of incrementing further comprises an act of incrementing the initial value by the step value.

24. (Allowed) The method according to claim 21, further comprising an act of determining the detection revisit time by evaluating an open-form equation that determines a partial contribution for each of the first and second illumination times to the detection revisit time.

25. (Allowed) The method according to claim 21, wherein the act of iteratively searching further comprises an act of determining a trial detection revisit time.

26. (Allowed) The method according to claim 25, wherein the act of iteratively searching further comprises an act of determining if the trial detection revisit time exceeds an

acceptable maximum revisit time, and if so, limiting a value of the trial detection time to a value of the acceptable maximum revisit time.

27. (Allowed) The method according to claim 25, wherein the act of determining a trial detection revisit time comprises determining an average value of the revisit time.

28. (Allowed) The method according to claim 27, further comprising an act of improving the trial detection revisit time by incrementing the value, and determining whether the improved trial detection revisit time is within a tolerance value.

29. (Allowed) The method according to claim 25, further comprising an act of determining the total number of illuminations made within a predetermined period, and using the total number of illuminations and the average value of the revisit time, determine an initial detection revisit time.

30. (Currently amended) An apparatus comprising:  
a computer-readable medium having computer-readable signals stored thereon that define instructions that, as a result of being executed by a computer, instruct the computer to perform a method for preparing to detect an emitter signal which emitter signal presents a plurality of illumination times to a detecting receiver, the method ~~comprising~~ including acts of:  
determining at least one first illumination time of the plurality of illumination times;  
determining at least one second illumination time of the plurality of illumination times; and  
iteratively searching for a detection revisit time that is used to detect the first and second illumination times while satisfying a specified probability of detecting the emitter signal.

31. (Previously presented) The computer-readable medium according to claim 30, wherein the method further comprises an act of determining an initial value of detection revisit time, and wherein the act of iteratively searching comprises an act of incrementing the initial value of

detection revisit time, and determining whether the decremented value satisfies the acceptable probability of detecting the emitter signal.

32. (Previously presented) The computer-readable medium according to claim 31, wherein the method further comprises an act of determining a step value, and wherein the act of incrementing further comprises an act of incrementing the initial value by the step value.

33. (Previously presented) The computer-readable medium according to claim 30, wherein the method further comprises an act of determining the detection revisit time by evaluating an open-form equation that determines a partial contribution for each of the first and second illumination times to the detection revisit time.

34. (Previously presented) The computer-readable medium according to claim 30, wherein the act of iteratively searching further comprises an act of determining a trial detection revisit time.

35. (Previously presented) The computer-readable medium according to claim 34, wherein the act of iteratively searching further comprises an act of determining if the trial detection revisit time exceeds an acceptable maximum revisit time, and if so, limiting a value of the trial detection time to a value of the acceptable maximum revisit time.

36. (Previously presented) The computer-readable medium according to claim 34, wherein the act of determining a trial detection revisit time comprises determining an average value of the revisit time.

37. (Previously presented) The computer-readable medium according to claim 36, wherein the method further comprises an act of improving the trial detection revisit time by incrementing the value, and determining whether the improved trial detection revisit time is within a tolerance value.

38. (Previously presented) The computer-readable medium according to claim 34, wherein the method further comprises an act of determining the total number of illuminations made within a predetermined period, and using the total number of illuminations and the average value of the revisit time, determine an initial detection revisit time.